IMAGE ANALYSIS SYSTEMS FOR GRADING OF MEAT, PREDICTING QUALITY OF MEAT AND/OR PREDICTING MEAT YIELD OF AN ANIMAL CARCASS

Abstract

The invention is an image analysis system and method for grading of meat, predicting quality of meat and/or predicting meat yield of an animal. One embodiment of the invention is particularly designed to capture an image of the 12th rib cross section of the ribeye and perform an image analysis of the ribeye for grading purposes. The image capturing camera portion of the system has a wedged shaped camera housing for ease of insertion into the ribbed incision. The image capturing portion of the system further comprises a camera with a flash for consistent lighting. The camera is positioned such that it views the ribeye cross section at an angle to accommodate the wedge shape of the camera housing for ease of insertion in the incision. The camera housing also has various alignment means to facilitate the user's ability to capture images in a consistent manner. Once the image is captured either

digitally or captured and converted to a digital image, an image analysis is performed on the digital image to determine parameters such as the percentage lean, total area of the ribeye, total fat area, total lean area, percent marbling, and thickness of fat adjacent to the ribeye, and other parameters. These parameters are used to predict value determining traits of the carcass.